AGENCY USE ONLY

PERMIT NO.:	Date Rec'd.:	Amount Rec'd.:	Check No.:	Rec'd By:
MTG010216	2/5/15	$0		KJ

Montana Department of
ENVIRONMENTAL QUALITY

WATER PROTECTION BUREAU

FORM
NOI

Notice of Intent (NOI) for Montana Pollution Discharge Elimination System Application for New and Existing Concentrated Animal Feeding Operations

The Application form is to be completed by the owner or operator of a Concentrated Animal Feeding Operation (CAFO) or Aquatic Animal Production Facility. Please read the attached instructions before completing this form. You must print or type legibly; forms that are not legible or are not complete will be returned. You must maintain a copy of the completed application form for your records.

Section A - Application Status *(Check one):*

- ☐ New — No prior application submitted for this site.
- ☐ Resubmitted — Permit Number: MTG _____
- ☐ Renewal — Permit Number: MTG 010216
- ☒ Modification — Permit Number: MTG _____

Section B - Facility or Site Information *(See instruction sheet.):*

Site Name Twin Hills colony

Site Location SE¼ SE¼ S10 26N SE

Nearest City or Town Carter MT 59420 County Chouteau

Latitude _____ Longitude _____

Date Facility began operation? _____

Is this facility or site located on Indian Lands? ☐ Yes ☑ No

Section C - Applicant (Owner/Operator) Information:

Owner or Operator Name David D. Hofer - Sec-Treas

Mailing Address 4177 Beaver Slide Rd

City, State, and Zip Code Carter, Mont 59420

Phone Number 406-734-5216

Is the person listed above the owner? ☐ Yes ☒ No

Status of Applicant *(Check one)* ☐ Federal ☐ State ☒ Private ☒ Public ☐ Other (specify) _____

Section D - Existing or Pending Permits, Certifications, or Approvals: ☐ None

☐ MPDES _____ ☐ RCRA _____

☐ PSD (Air Emissions) _____ ☐ Other _____

☐ 404 Permit (dredge & fill) _____ ☐ Other _____

Section E – Standard Industrial Classification (SIC) Codes:

Provide at least one SIC code which best reflects the activity of project described in Section H.			
Code	**A. Primary**	**Code**	**B. Second**
1	213	2	252
Code	**C. Third**	**Code**	**D. Fourth**
3	251	3	

Section F - Facility or Site Contact Person/Position: 213 252

Name and Title, or Position Title Jake WiPF, Hogs Peter HoFer Chicken

Mailing Address John HoFer

City, State, and Zip Code CArTer, MT 59420 Broiler Fryers +

Phone Number 734-5280 x 311 x 312 x 313 (2.5M) Roster Chickens

Section G – Receiving Surface Waters(s):

Outfall/Discharge Locations: For each outfall, List latitude and longitude to the nearest second and the name of the receiving waters			
Outfall Number	**Latitude**	**Longitude**	**Receiving Surface Waters**
001	48,00	111 04'	NA Drg Out
002	57,26"N	16,69 W	
003			
004	ELEV	3297 FT	
005			

Map: Attach a topographic map extending one mile beyond the property boundaries or the site activity identified in Section B depicting the facility or activity boundaries, major drainage patterns, and the receiving surface waters, stated above. Also identify the specific location of the production area, and land application area(s).

Is the receiving water on the 303(d) list for nutrients (nitrogen and/or phosphorus) ☐ Yes ☐ No

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Section H – Concentration Animal Feeding Operation Characteristics

Waste Production, Storage and Disposal

	Animal type	Number in Open Confinement	Number Housed Under Roof
☐	Mature Dairy Cows		
☐	Dairy Heifers		
☐	Veal Calves		
☐	Cattle (not dairy or veal)		
☐	Swine (55 lbs or over)		1000
☐	Swine (55 lbs or under)		4530
☐	Horses		
☐	Sheep or Lambs		
☐	Turkeys		
☐	Chickens (broilers)		2500
☐	Chickens (layers)		9620
☐	Ducks		
☐	Other (Specify:)		
☐	Other (Specify:)		
☐	Other (Specify:)		

Manure, Litter and/or Wastewater Production and Use.

How much manure, litter, and process wastewater is generated annually by the facility?

Solid (tons): 475 TON HOG 80 TON POULTRY Liquid/Slurry (gallons): 4,300,000

If land applied, how many acres of land under control of the permit applicant are available to apply the manure, litter, or process wastewater generated from the facility? (Note: Do not include setback distances in available acreage

_____ Acres

How much manure, litter, and process wastewater is transferred to other persons per year? (estimated) Solid (tons): N A Liquid/Slurry (gallons): N A

Were the containment structures built after February 2006?

- ☐ Do the waste containment structures have 10 feet of separation between the pond bottom and any bedrock formations?
- ☐ Do the waste containment structures have 4 feet of separation from the pond bottom and any ground water?
- ☐ Were any of the waste containment structures built within 500 feet of any existing well? NO

	Type of Containment/Storage	Total Capacity	Units (gallons / tons)	Days of Storage
☐	Anaerobic Lagoon			
☐	Storage Pond #1			
☐	Storage Pond #2			
☐	Storage Pond #3			
☐	Storage Pond #4			
☐	Storage Pond #5			
☑	Above Ground Storage Tank	2,900,000	4,300,000 P/y	180 + 140 re.
☐	Below Ground Storage Tank #1			
☐	Below Ground Storage Tank #2			
☐	Underfloor Pits			
☐	Roofed Storage Shed			
☐	Concrete Pad			
☐	Impervious Soil Pad			
☐	Other (Specify:)			
☐	Other (Specify:)			

Physical Data for CAFO

Nutrient Management Plan

All Concentrated Animal Feeding Operations seeking permit coverage after July 31, 2007 are required to complete and implement a Nutrient Management (NMP). The NMP must be submitted to the Department using the form provided by the Department (Form NMP). Check the box below that applies and provide the required information. The NMP must be developed in accordance with ARM 17.30.1334 and implemented upon the effective date of permit coverage. (Check One)

☒ Does the facility have an NMP?

Date NMP was developed: 8-24-2007

Date NMP was last modified: 10-23-14

☐ NMP has not been prepared; provide detailed explanation below

Section I – Supplemental Information

ion J - CERTIFICATION

ermittee Information:

This Form NMP must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print)	
David D Hofer	
B. Title (Type or Print)	**C. Phone No.**
Secretary	734-5216
D. Signature	**E. Date Signed**
David D Hofer	1-28-15

The Department will not process this form until all of the requested information is supplied, and the appropriate fees are paid. Return this form (NOI) and the applicable fee to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

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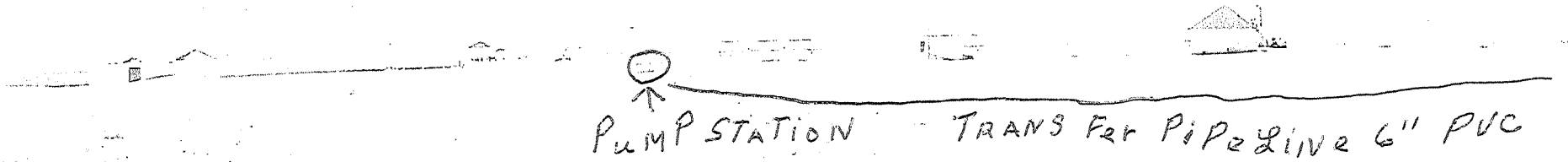
Common Standard Industrial Classification (SIC) Codes

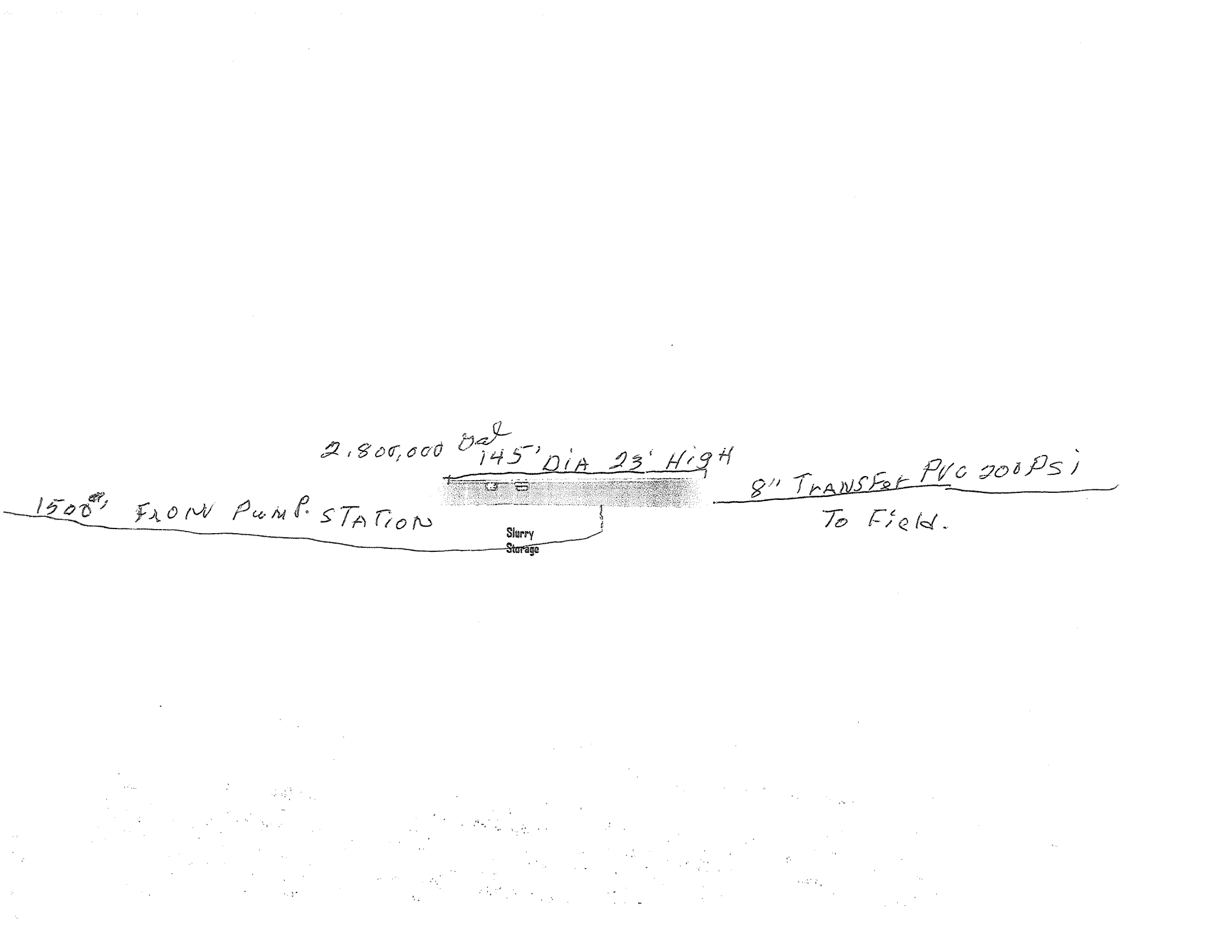
Division	SIC	Industrial Activity Represented
Agriculture, Forestry and Fishing	211	Beef Cattle Feedlots
	212	Beef Cattle, Except Feedlots
	213	Hogs
	214	Sheep and Goats
	241	Dairy Farms
	251	Broiler, Fryer and Roaster Chickens
	252	Chicken Eggs
	253	Turkeys and Turkey Eggs
	254	Poultry hatcheries
	259	Poultry and Eggs, not elsewhere classified (Ducks)
	272	Horses and other Equines
	921	Fish Hatcheries and Preserves
Mining	1021	Copper Ores
	1031	Lead and Zinc
	1044	Silver Ores
	1041	Gold Ores
	1221	Bituminous Coal and Lignite Surface Mining
	1311	Crud Petroleum and Natural Gas
	1442	Construction Sand and Gravel
Construction	1521	General Contractor - Single Family Houses
	1522	General Contractor - Residential Bldgs. Other Than Single Family
	1542	General Contractor - Nonresidential Buildings, Other than Industrial Buildings and Warehouses
	1611	Highway and Street Construction, Except Elevated Highways
	1622	Bridge, Tunnel, and Elevated Highway construction
	1623	Water, Sewer, Pipeline, communications & Power Line Construction
	1629	Heavy construction, Not Elsewhere Classified
	1794	Excavation Work
	7349	Building Cleaning and Maintenance Services, Not Elsewhere
Manufacturing	2011	Meat Packing Plants
	2063	Beet Sugar
	2421	Sawmills and Planning Mills, General
	2611	Pulp Mills
	2911	Petroleum Refining
	3241	Cement, Hydraulic
Transportation, Communications, Electric, Gas and Sanitary Services	4911	Electric Services
	4941	Water Supply
	4952	Sewerage Systems
	4953	Refuse Systems
Wholesale Trade	5093	Scrap and Waste Materials
	5154	Livestock
	5171	Petroleum Bulk Stations and Terminals
Retail Trade	5541	Gasoline Service Station
	5984	Liquefied Petroleum Gas (Bottled Gas) Dealers
Services	7011	Hotels and Motels
	7033	Recreational Vehicle Parks and Campsites
	7542	Carwashes
Public Administration	9224	Fire Protection
	9711	National Security

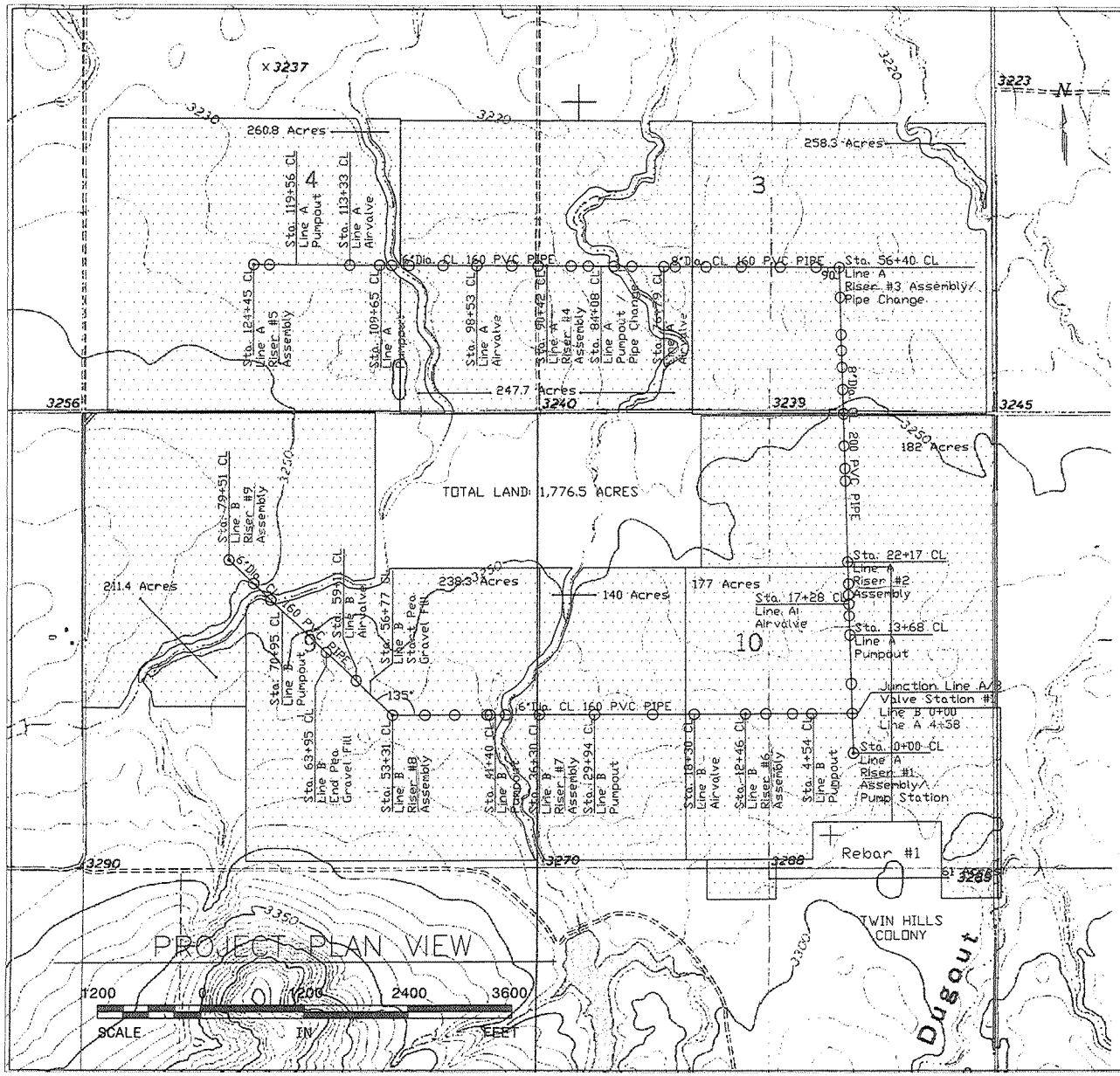

PUMP STATION
TRANSFER PIPELINE 6" PVC

2,800,000 Gal 145' DIA 23' HIGH

8" TRANSFER PVC 200PSI To Field.

1500' FROM PUMP. STATION





SYSTEM DETAILS:
- 1/4 MILE HARD HOSE, 5" I.D. 200 PSI PE3408
- 1/4 MILE SOFT HOSE, 6" I.D. 200 PSI REINFORCED RUBBER
- 1,776.5 ACRES COVERED
- DESIGN APPLICATION RATE 5000 GAL/AC
- Line A: 8" PVC PR 200 to Sta. 56+40; 8" PVC PR 160 from Sta. 56+40 to Sta. 84+08; 6" PVC PR 160 from Sta. 84+08 to Sta. 124+45.
- Line B: 6" PVC PR 200 to Sta. 12+46; 6" PVC PR 160 from Sta. 12+46 to Sta. 79+51.
- 1 PUMP @ SLURRY TANK, TDH 260 FT/500 GPM

SURVEY REFERENCE POINT DATA (local)			
REFERENCE	NORTHING	EASTING	ELEV.
Rebar #1	10000	10000	1000

Rebar #1 N 209383253.5
E 19472940.3
UTM 12N Int'l ft (NAD 83)

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For information only--Not a design drawing

Plan View shown over USGS quad per Owner request
Created April 13, 2015

APPROVED _____ DATE _____

TITLE _____ DATE: Jun. 2010
DESIGNED C. Fisher DATE: Jun. 2010
DRAWN K. Wickey DATE:
CHECKED DATE:

PROJECT PLAN VIEW
MANURE TRANSFER PIPELINE SYSTEM
TWIN HILLS COLONY 2010 EQIP
CHOUTEAU COUNTY MONTANA

NRCS Natural Resources Conservation Service

CAD FILE NAME twin_hillsmtran10_planview1.dwg
DRAWING NO. MT--TC--061410
SHT SIZE. 11X17 PLOT SCALE 1:1200
SHEET ____ OF ____

AGENCY USE ONLY				
PERMIT NO.:	Date Rec'd.:	Amount Rec'd.:	Check No.:	Rec'd By:

Montana Department of
ENVIRONMENTAL QUALITY

WATER PROTECTION BUREAU

FORM
NMP

Nutrient Management Plan

READ THIS BEFORE COMPLETING FORM: Before completing this form (Form NMP), Concentrated Animal Feeding Operation (CAFO) operators need to read the General Permit, particularly Part IV.A. CAFO operators also need to read the "Instructions For filling out Form NMP," found at the back of this form. Form NMP is intended to help CAFO operators develop a site-specific Nutrient Management Plan, in compliance with Part IV.A of the General Permit and all applicable State rules and statutes. Your Nutrient Management Plan must be maintained at the site as required in Part III of the General Permit. Sections B and C on your Form NMP must state the information exactly the same way as it was stated on the most recently submitted version of your NOI-CAFO. Attach additional pages as necessary, indicating the corresponding section number on this NMP form. The 2013 General Permit, current fee schedule, and related forms are available from the Water Protection Bureau at (406) 444-3080 or http://www.deq.mt.gov/wqinfo/MPDES/CAFO.asp

Section A – NMP Status:

- ☐ New — No prior NMP submitted for this site.
- ☐ Resubmitted — Previous NMP found incomplete.
- ☐ Modification — Change or update to existing NMP.
- ☑ New 2013 — New 2013 version of NMP.

Section B – Facility Information:

Facility Name Twin Hills Colony

Facility Location SE¼ SE¼ S10 - 26N 5E

Nearest City of Town Carter MT. County Chouteau

Section C – Applicant (Owner/Operator Information):

Owner or Operator Name David Hofer

Mailing Address 4177 Beaverslide Rd

City, State, and Zip code Carter MT. 59420

Facility Phone Number (406) 734-5316

Email

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Section D – NMP Minimum Elements:

1. Livestock Statistics				
Animal Type and number of animals	**# of Days on Site (per year)**			**Annual Manure Production (tons, cu. yds. or gal**
	Weight	DAL	DAYS	
1. GESTATing SOWS 400	385	2.8	365	408,800
2. Boars 30	400	2.39	365	26,171
3. SOWS & LITTER 100	400	4.1	365	149,650
4. NORSERY PIGS 1000	25	1.13	365	412,450
5. GROWER TO FINISH 4000	150	.289	365	4,219,400
6.				5,216,471 TOTAL
7. POULTRY LAYER 9600	3LL	.15 LBS	365	263 TONS
8. PULLETS LAYERS 2500	2 LBS	.13LB	267	43 TONS

Method used for estimating annual manure production:

CIRCULAR DEQ 9

2. Manure Handling

a. Describe Manure handling at the facility:

MANURE IS COLLECTED IN UNDERSLAT CONTAINMENT PITS

POULTRY MANURE IS COLLECTED ON A UNDERCAGE BELT WHICH TAKES THE MANURE OUT OF LAYER FACILITY

b. Frequency of Manure Removal from confinement areas:

HOGS EVERY 14 DAYS POULTRY EVERY 3rd DAY

c. Is this manure temporarily stored in any location other than the confinement area? ☑ Yes ☐ No

If so then how and where? MANURE GRAVITY FLOWS OUT TO A HOLDING PIT THEN IT IS PUT THROUGH A SEPARATER SOLIDS GO TO STACKING PAD. LIQUIDS IS PUMPED SLURRY STORE TANK

d. Is manure stored on impervious surface? ☑ Yes ☐ No

If yes, describe type and characteristics of this surface:

CONCRETE FLOORS & WALLS

3. Waste Control Structures

Waste Control Structures (name/type)	Length (ft.)	Width (ft.)	Depth (ft.)	Volume (cubic ft. or gallons)	Number of days of storage
1. HARVESTSTORE		145FT DIA		2,654, 274 GAL	
2. VERTICAL TANK			23FT	TOTAL VOLUME	
3.				2839 45C gal	
4.					
5.					
6. DRY STACK CONCRETE			70' x	70' x	8'
7.					484TON
8.					
9.					
10.					
11.					
12.					

What is the 24 hr. 25 yr. storm event at this facility Berm & DITCH

Production area: 2 **acres. Type of lot (dirt or paved):** DIRT

Area contributing drainage form outside CAFO that enters confinement areas and waste storage, conveyance, or treatment structures: 2 **acres.**

What is the annual precipitation during the critical storage period 10 inches

How much freeboard do the pond(s) have NONE

4. Disposal of Dead Animals.

Describe how dead animals are disposed of at this facility:

TAKING TO A COMPOSTING FACILATY EVERY DAY

5. Clean Water Diversion Practices

Describe how clean water is diverted from production area:

BERM + DITCH AROUND CONFINEMENT BARN + HARVESTORE

6. Prohibiting Animals and Wastes from Contact with State Waters

Describe how animals and wastes are prohibited from direct contact with state waters:

ANIMALS ARE CONFINED. WASTE INJECTED IN THE SOIL

Describe how Chemicals and other contaminants are handled on-site:

NO CHEMICALS USED, EXCEPT DISINFECTANTS which are FLUSHED DOWN WITH WASTE WATER

7. Best Management Practice (BMPS)

Describe in detail all temporary, permanent and structural BMPS which will be used to control runoff of pollutants from facility's production area. Indicate the location of these measures. If BMPS are not installed include a schedule for implementation of each of these measures. Examples of BMP measures could include but are not limited to: constructing ditches, terraces,, and waterways above and open lot to divert clean water run on; installing gutters, downspouts and buried conduits to divert roof drainage; providing more roofed area: decreasing open lot surface area; repairing of adjusting water systems to minimize water wastage; using practical amounts of water for cooling purposes; recycling water if practical and applicable.

Production Area BMP's KEEP AREA AROUND CONFINED BUILDING CLEAN AROUND LOADING CHUTES, CLEAN UP DEAD ANIMALS, DIVERT STORM WATER AWAY FROM BUILDING, CLEAN WASTE FEED FROM FEED MIXING BERM OFF DRY STCK FACILATY

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's land production area. Indicate the location of these practices. If not already in use, include a schedule for implementation of each of these measures. Attached details and specifications may be used to supplement this description. Examples of BMP measures could include but are not limited to: maintaining setbacks from surface waters for manure applications; managing irrigation practices to prevent ponding of wastewater on land application sites;

never spray irrigating waste on to frozen ground: consulting with the Department prior to applying any liquid waste to frozen or snow-covered ground; applying wastes at agronomic rates.

Land Application BMP's

Buffers	☑ Yes ☐ No	Conservation Tillage	☑ Yes ☐ No
Constructed Wetlands	☐ Yes ☑ No	Grass Filter	☐ Yes ☑ No
Infiltration Field	☐ Yes ☑ No	Residue Management	☑ Yes ☐ No
Set backs	☑ Yes ☐ No	Terrace	☐ Yes ☑ No
Other examples			

8. Implementation, Operation, Maintenance and Record Keeping – Guidance

The permittee is required to develop guidance addressing implementation of NMP, proper operation and maintenance of the facility, and record keeping as described in Part 2 of the permit.

Has a guidance document been developed for the facility? ☑ Yes ☐ No

Certify the document address the following requirements:

Implementation of the NMP:	☑ Yes ☐ No
Facility operation and maintenance:	☑ Yes ☐ No
Record keeping and reporting	☑ Yes ☐ No
Sample collection and analysis:	☑ Yes ☐ No
Manure transfer	☐ Yes ☑ No

Provide name, date and location of most recent documentation:

USDA'S NRCS, Fort Benton Field office

Circular OEQ 9 8-24-07

If your answer to any of the above question is no, provide explanation:

we utilize all manure on our own ground

Section E – Land Application

Will manure be land applied to land either owned, rented, or leased by the owner or operator of the facility?

☒ Yes If yes, then the information requested in Section E must be provided.

☐ No If no, then provide an explanation of how animal waste at this facility are managed.

Photos and/or Maps

Attach an aerial photograph or map of the site where manure is to be applied. (Use multiple photos/maps if necessary to show required details.) The photo(s)/map(s) must be printed on no larger than an 11"X 17" piece of paper, and must clearly identify the following items:

- Individual field boundaries for all planned land application areas
- A name, number, letter or other means of identifying each individual land application field
- The location of any downgradient surface waters.
- The location of any downgradient open tile line intake structures NONE
- The location of any downgradient sinkholes NONE
- The location of any downgradient agricultural well heads NONE
- The location of all conduits to surface waters NONE
- The specific manure/waste handling or nutrient management restrictions associated with each land application field NO
- The soil type(s) present and their locations within the individual land application field(s)
- The location of buffers and setbacks around state surface waters, well heads, etc.

Land Application Equipment Calibration

Describe the type of equipment used to land apply wastes and the calibration procedures:

30 FT MANURE PLOW WITH A METER, DRAG HOSE USED TO APPLY MANURE FROM TRANSFER LINE

Manure Sampling and Analysis Procedures

A representative manure sample will be analyzed a minimum of once annually for Total Nitrogen, and Total Phosphorus. Analysis results will be reported in lbs/ton or lbs/1,000 gal. Results of these analyses will be used in determining rates for manure, litter, and process wastewater.

Manure Sample collection will occur according to ARM 17.30.1334

Other (describe) SECTION 5 OF DEPARTMENT CIRCULAR DEQ 9

Soil Sampling and Analysis Procedures

Representative soil (composite) samples from the top 6 inches layer of soil for each field where manure will be applied must be analyzed for phosphorus content at least once every three years. Analyses will be conducted by a qualified laboratory, using the Olsen P test. Results will be reported in parts per million (ppm) and will be used in determining application rates for manure, litter, and process wastewater

Soil samples collection will occur according the methods in ARM 17.30.1334 SECTION 5 OF DEPARTMENT CIRCULAR DEQ 9

Other (describe) SOIL SAMPLES TAKING YEARLY

Phosphorus Risk Assessment

The permittee shall access the risk of phosphorus contamination of state waters. An assessment shall be conducted for each field, under the control of the operator, to which manure, litter or process wastewater will or

may be applied. If a new field is a[illegible] in the future, then the permittee must s[illegible] it a revised (modified) NMP. The permittee has the option of using Method A or Method B (below) to complete the assessment. Copies of all tables and calculations used to complete the assessments, as well as the results of the assessments, shall be submitted to the Department and copies shall be maintained on-site at the facility and available for Departmental review. The results of the assessments shall be used to determine the appropriate basis for land application of wastes from the facility.

Method Used

Indicate which method will be used to determine phosphorus application:

X Method A – Representative Soil Sample

Method B – Phosphorus Index

Method A – Representative Soil Sample

a. Obtain one or more representative soil sample(s) from the field per 17.30.1334
b. Have the sample analyzed for Phosphorus by a qualified lab. The "Olsen P test" must be used for the analysis, and the result must be reported in parts per million (ppm)
c. Using the results of the Olsen P test, determine application basis according to the Table below.

Soil Test

Olsen P Soil Test Results (ppm)	Application Basis
<25.0	Nitrogen Needs of Crop
25.1 - 100.0	Phosphorus Needs of Crop
100.0 – 150.0	Phosphorus Needs up to Crop Removal Rate
>150.0	No Application allowed

Method B – Phosphorus Index

a. Complete a phosphorus Index according to the crop grown on each field. Complete table in Appendix A to calculate phosphorus index. For information on filling out specific sections in Appendix A, please refer to the method as described in Natural Resource Conservation Service (NRCS), Agronomy Technical Note MT-77 (rev3), January 2006.
b. Using the calculated Total Phosphorus Index Value, assign the overall site/field vulnerability to phosphorus loss according to the table below.

Total Phosphorus

Total Phosphorus Index Value	Site Vulnerability to Phosphorus Loss
<11	Low
11-21	Medium
22-43	High
>43	Very High

c. Using the calculated Site Vulnerability to Phosphorus Loss, determine the appropriate application basis according to the table below.

Site Vulnerability to Phosphorus Loss	Application Basis
Low	Nitrogen Needs
Medium	Nitrogen Needs
High	Phosphorus Need Up to Crop Removal
Very High	Phosphorus Crop Removal or No Application

The applicant has 2 ways in which to report how manure or process wastewater application rates can be reported to DEQ.

1. **Linear Approach**. Expresses rates of application as pounds of nitrogen and phosphorus. CAFOs selecting the linear approach to address rates of application must include in the NMP submitted to the permitting authority the following information for each crop, field, and year covered by the NMP, which will be used by the permitting authority to establish site-specific permit terms:
- The maximum application rate (pounds/acre/year of nitrogen and phosphorus) from manure, litter, and process wastewater.
- The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field. [If a state does not have an N transport risk assessment, the NMP must document any basis for assuming that nitrogen will be fully used by crops.] The CAFO must specify any conservation practices used in calculating the risk rating.
- The crops to be planted or any other uses of a field such as pasture or fallow fields.
- The realistic annual yield goal for each crop or use identified for each field.
- The nitrogen and phosphorus recommendations from in ARM 17.30.1334 (technical standard) for each crop or use identified for each field.
- Credits for all residual nitrogen in each field that will be plant-available.
- Consideration of multi-year phosphorus application. For any field where nutrients are applied at a rate based on the crop phosphorus requirement, the NMP must account for single-year nutrient applications that supply more than the crop's annual phosphorus requirement.
- All other additions of plant available nitrogen and phosphorus (i.e., from sources other than manure, litter, or process wastewater or credits for residual nitrogen).
- The form and source of manure, litter, and process wastewater to be land-applied.
- The timing and method of land application. The NMP also must include storage capacities needed to ensure adequate storage that accommodates the timing indicated.
- The methodology that will be used to account for the amount of nitrogen and phosphorus in the manure, litter, and wastewater to be applied.
- Any other factors necessary to determine the maximum application rate identified in accordance with this Linear Approach.

2. **Narrative Rate Approach**. Expresses a narrative rate of application that results in the amount, in tons or gallons, of manure, litter, and process wastewater to be land applied. CAFOs selecting the narrative rate approach to address rates of application must include in the NMP submitted to the permitting authority the following information for each crop, field, and year covered by the NMP, which will be used by the permitting authority to establish site-specific permit terms:
- The maximum amounts of nitrogen and phosphorus that will be derived from all sources of nutrients (pounds/acre for each crop and field).
- The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field. The CAFO must specify any conservation practices used in calculating the risk rating.
- The crops to be planted in each field or any other uses of a field such as pasture or fallow fields, including alternative crops if applicable. Any alternative crops included in the NMP must be listed by field, in addition to the crops identified in the planned crop rotation for that field.
- The realistic annual yield goal for each crop or use identified for each field for each year, including any alternative crops identified.
- The nitrogen and phosphorus recommendations from ***[the permitting authority to specify acceptable sources]*** for each crop or use identified for each field, including any alternative crops identified.
- The methodology (including formulas, sources of data, protocols for making determination, etc.) and actual data that will be used to account for: (1) the results of soil tests required by Parts II.A.4.b and III.A.3.g of this

permit, (2) credits for all nitrogen in the field that will be plant- available, (3) the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied, (4) consideration of multi-year phosphorus application (for any field where nutrients are applied at a rate based on the crop phosphorus requirement, the methodology must account for single-year nutrient applications that supply more than the crop's annual phosphorus requirement), (5) all other additions of plant available nitrogen and phosphorus to the field (i.e., from sources other than manure, litter, or process wastewater or credits for residual nitrogen), (6) timing and method of land application, and (7) volatilization of nitrogen and mineralization of organic nitrogen.

- Any other factors necessary to determine the amounts of nitrogen and phosphorus to be applied in accordance with the Narrative Rate Approach.
- NMPs using the Narrative Rate Approach must also include the following projections, which will not be used by the permitting authority in establishing site-specific permit terms:

i. Planned crop rotations for each field for the period of permit coverage.
ii. Projected amount of manure, litter, or process wastewater to be applied.
iii. Projected credits for all nitrogen in the field that will be plant-available.
iv. Consideration of multi-year phosphorus application.
v. Accounting for other additions of plant-available nitrogen and phosphorus to the field.
vi. The predicted form, source, and method of application of manure, litter, and process wastewater for each crop

- If the receiving water is on the 303(d) list for nutrients then the narrative rate approach must be used.

a. For the Linear Approach the permittee will complete the Nutrient Budget Worksheet, below, for the next 5 years to which manure or process waste water is or may be applied. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget \ .tsheet

Field identification: S4-26N-5E Year: 2014 Crop: W WHEAT

Expected Crop Yield: : 80 BUSHELS PER ACRE.

Phosphorus index results or Phosphorus application from soil test: / FROM SOIL TEST

Method of Application: PLOW INJECTED

When will application occur: OCTOBER OF 2014

		Nutrient Budget	Nitrogen-based Application	Phosphorus-based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	80 bu/A 14% Pro 264 lbs/A of N	91 lbs/AC	
2	(-)	Credits from previous legume crops, lbs/ac	SOIL N 50.16/AC	SOIL TEST 8 PPM (OLSEN)	
3	(-)	Residuals from past manure production lbs/acre	—0—	—0—	
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	—0—	—0—	
5	(-)	Nutrients supplied in irrigation water, lbs/acre	—0—	—0—	
6		= Additional Nutrients Needed, lbs/acre	214 lbs/AC	91 lbs/AC	
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	35 lbs/1000 GAL	16 lbs/1000 GAL	
8	(x)	Nutrient Availability factor, for Phosphorus based application use 1.0	35 x 66 = 22.75 AVAILABLY 95% 21.6	98 % 0	
9		= Available Nutrients in Manure, lbs/ton or lbs/1000 gal	21.6 lbs 1000 GALS	16 lbs/1000 GAL	
10		Additional Nutrients needed, lbs/acre (calculated above)	214 lbs/AC	91 lbs/AC	
11	(/)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	21.6 lbs	16.16	
12		= Manure Application Rate, tons/acre or 1000 gal/acre	6000 GAL/AC	6000 GAL/AC	

Comments:

Section F - CERTIFICATION

Permittee Information: This form must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print)	
David D. Hofer	
B. Title (Type or Print)	**C. Phone No.**
Sec/Tacay - Treasurer	406-734-5216
D. Signature	**E. Date Signed**
David D. Hofer	10-23-14

The Department will not process this form until all of the requested information is supplied, and the appropriate fees are paid. Return this form and the applicable fee to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

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CONSERVATION PLAN MAP (2)
MANURE TRANSFER and FIELD APPLICATION MAP

Date: 8/15/2008

Customer(s): TWIN HILLS COLONY INC

District: CHOUTEAU COUNTY CONSERVATION DISTRICT

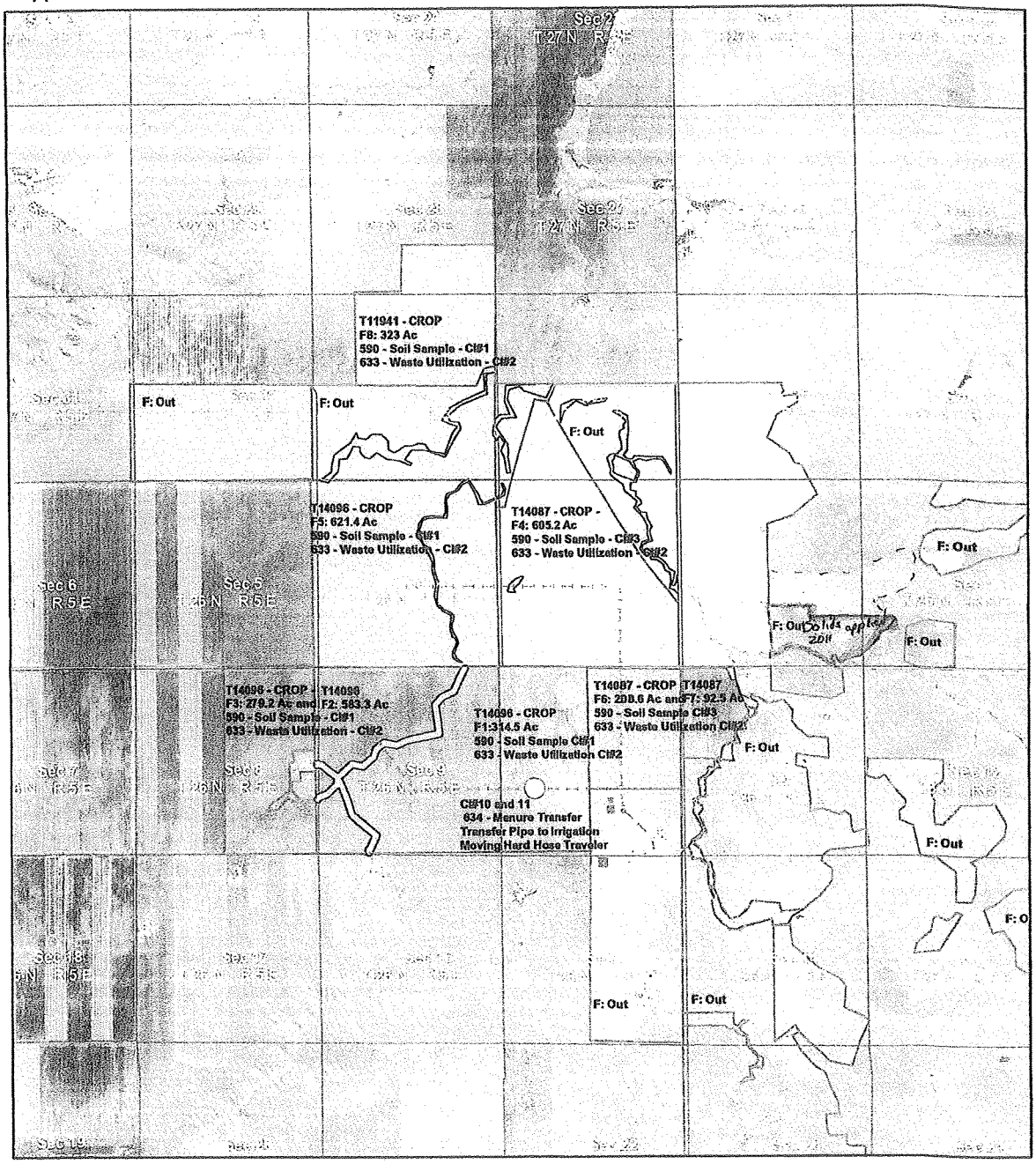
Approximate Acres: 3028 Ac

Field Office: FORT BENTON SERVICE CENTER

Agency: USDA - NRCS

Assisted By: Pam Linker

State and County: MT, CHOUTEAU



Legend

- Practices (lines)_Manure Transfer Pipe
- res_inv_Crop Fields in CNMP
- Buffer_Output
- Resource Inventory (Line)_Existing 12" Pipe
- Section_Lines

0 2,500 5,000 7,500 10,000 Feet

N

CONSERVATION PLAN MAP (2)
MANURE TRANSFER and FIELD APPLICATION MAP

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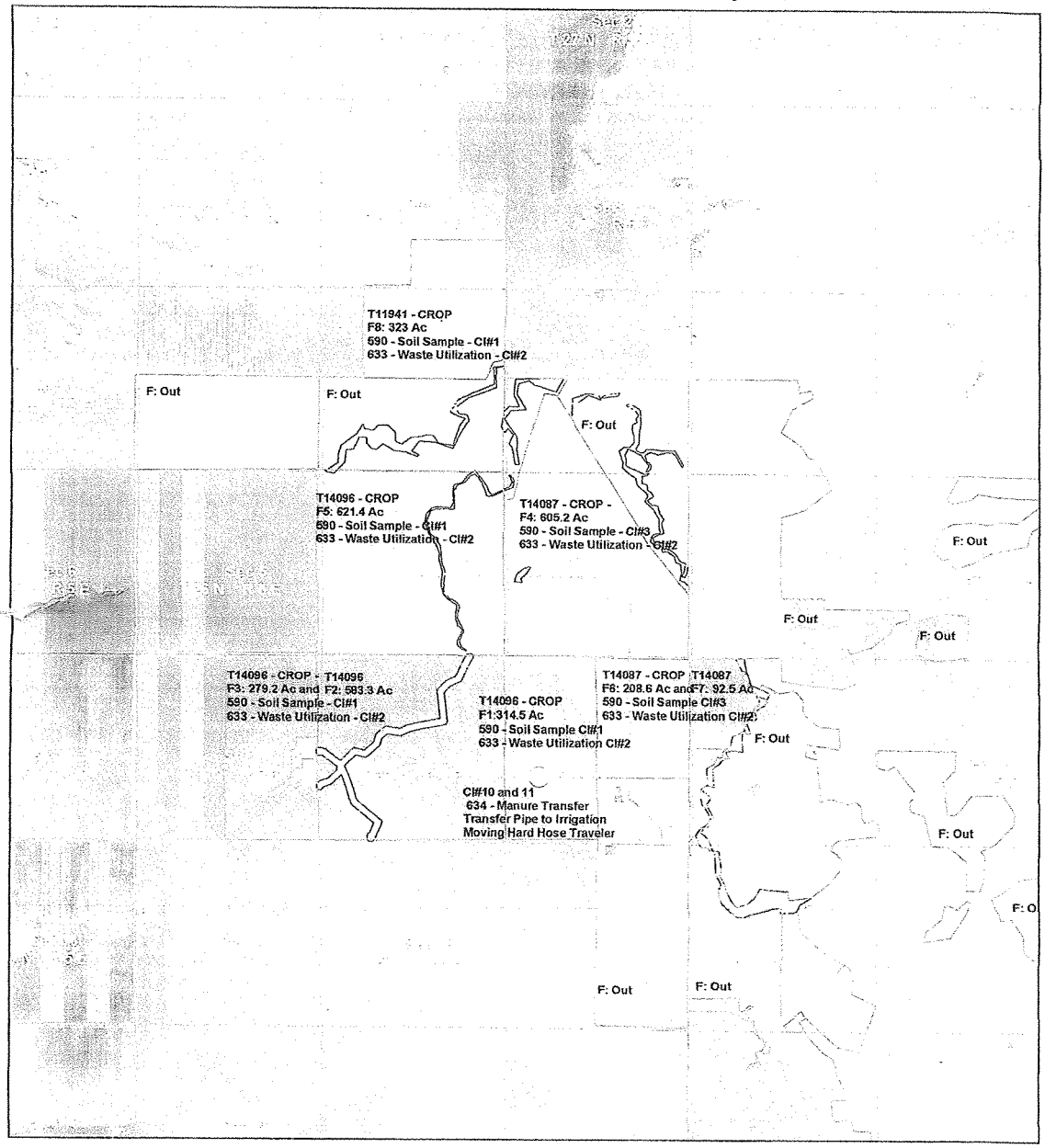


Legend

- Practices (lines)_Manure Transfer Pipe
- res_inv_Crop Fields in CNMP
- Buffer_Output
- Resource Inventory (Line)_Existing 12" Pipe
- Section_Lines

0 2,500 5,000 7,500 10,000 Feet

N

Topographic Map

Date: 8/22/2007

Customer(s): TWIN HILLS COLONY INC

District: CHOUTEAU COUNTY CONSERVATION DISTRICT

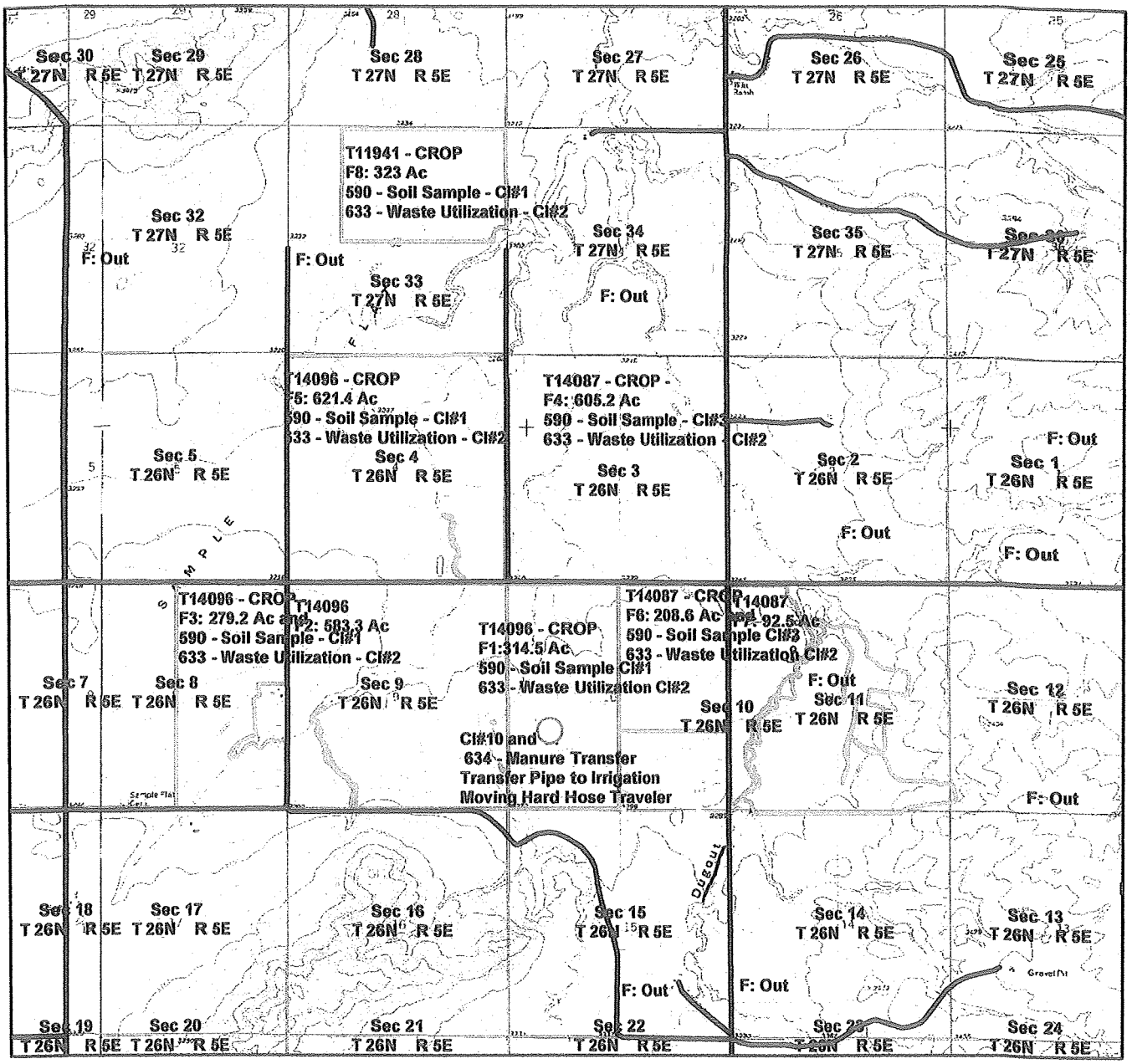
Approximate Acres: 3028 Ac

Field Office: FORT BENTON SERVICE CENTER

Agency: USDA - NRCS

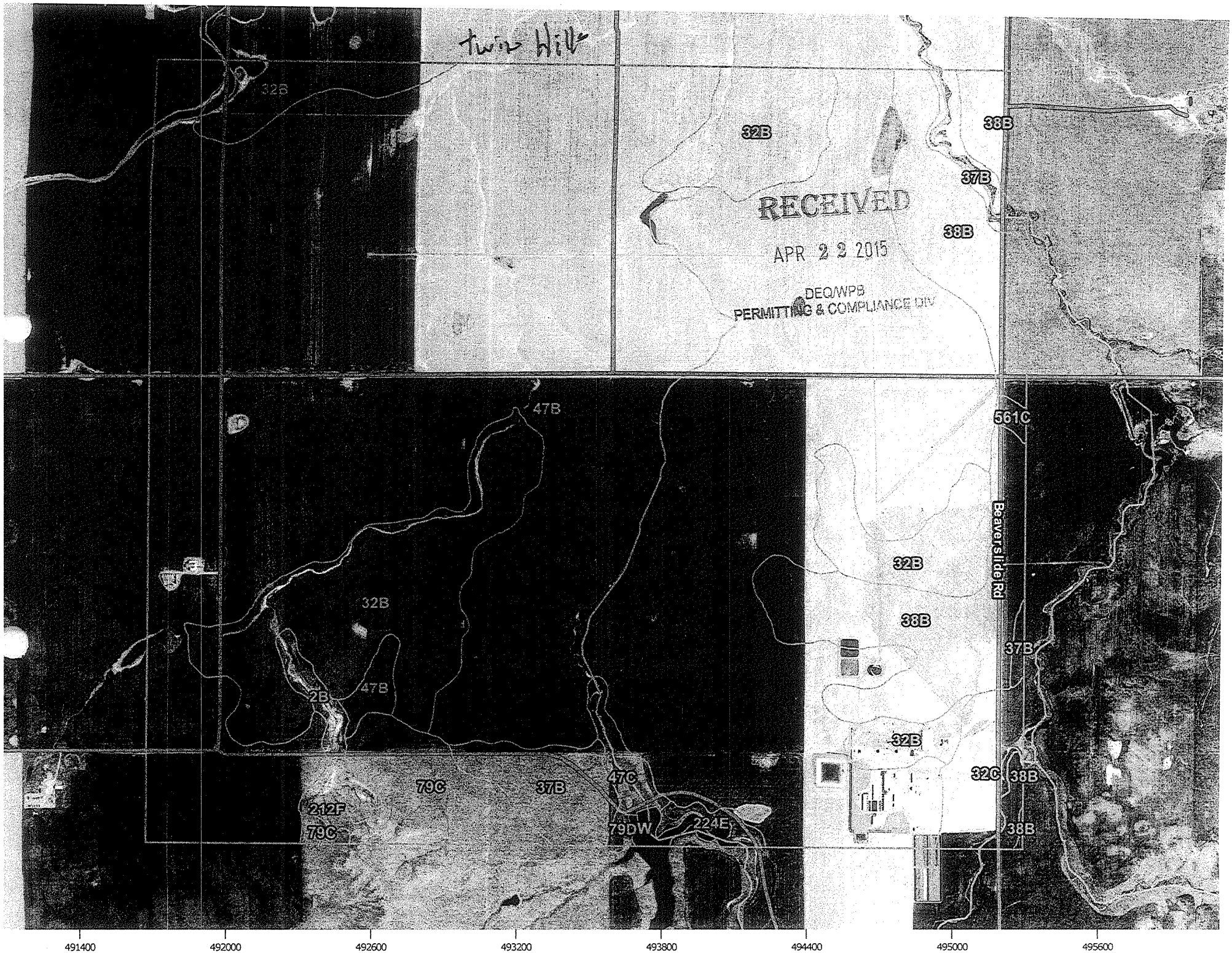
Assisted By: Pam Linker

State and County: MT, Chouteau



2,000 0 2,000 4,000 6,000 8,000 Feet

N


Twin Hill
32B
38B
37B
38B
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47B
561C
Beavers Ride Rd
32B
38B
37B
2B
47B
32B
32C
38B
79C
37B
47C
212F
79C
79DW
224E
38B
491400
492000
492600
493200
493800
494400
495000
495600

Twin Hills

Soil Map—Chouteau County Area, Montana
(Twin Hills Application Fields)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Chouteau County Area, Montana
Survey Area Data: Version 11, Sep 2, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 15, 2011—Jul 17, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

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Map Unit Legend

Chouteau County Area, Montana (MT615)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2B	Marcott-Bigsandy complex, 0 to 4 percent slopes	13.9	0.5%
32B	Kobase silty clay loam, 0 to 4 percent slopes	392.8	13.3%
32C	Kobase silty clay loam, 4 to 8 percent slopes	49.4	1.7%
37B	Evanston loam, 0 to 4 percent slopes	75.0	2.5%
38B	Ethridge silty clay loam, 0 to 4 percent slopes	254.5	8.6%
47B	Marias silty clay, 0 to 4 percent slopes	2,032.0	68.8%
47C	Marias silty clay, 4 to 8 percent slopes	17.5	0.6%
79C	Yamacall loam, 4 to 8 percent slopes	66.4	2.2%
79D	Yamacall loam, 8 to 15 percent slopes	3.4	0.1%
212F	Cabbart-Hillon loams, 25 to 70 percent slopes	23.5	0.8%
224E	Hillon-Joplin loams, 8 to 25 percent slopes	13.0	0.4%
561C	Scobey-Kevin clay loams, 4 to 8 percent slopes	4.0	0.1%
W	Water	7.0	0.2%
Totals for Area of Interest		**2,952.4**	**100.0%**

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